

Figure 1. USGS hydrologic features map of the Carson River watershed and surroundings.

# The Flow

*Delivering News from the Carson River Watershed Community*

Spring 2012

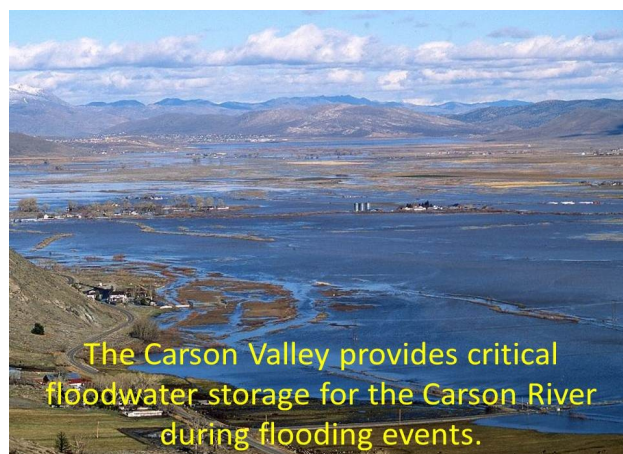
## CRC Reaffirms Main Message: Protect Floodplain from Development

Following the Carson River Coalition (CRC) Forum in February 2012, participants submitted feedback on the Forum via an electronic questionnaire. One question asked whether participants agreed or disagreed with the statement: "Protecting the floodplain from future development should continue to be the CRC's main message." Of the 67 people who answered, 94% agreed (61.2% strongly agreed/32.8% agreed). This result reaffirms the CRC main message developed in 2003 that provided the impetus for the development and publication of the 2008 Carson River Watershed Floodplain Management Plan (CRWFMP, 2008).

Why is protecting the floodplain from development such a critical

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*"Rivers were here long before man, and for untold ages every stream has periodically exercised its right to expand when carrying more than normal flow. Man's error has not been the neglect of flood control measures, but his refusal to recognize the right of rivers to their floodplain." (Engineering News-Record 1937)*



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## Weed Work in Douglas County~ Craig Burnside

2011 was a hallmark year for the Douglas County Weed Control Department in that Larry Hughes, long time Weed Coordinator, retired and Jeff Begovich was hired to replace him. Furthermore, two professional grade Trimble GPS units were purchased through a CWSD grant to assist with weed mapping. Finally, the Board of County Commissioners demonstrated their strong commitment to controlling noxious weeds by approving an additional \$100,000 in funding for Carson Valley Conservation District (CVCD) spray crews.

Douglas County's Weed Department has a lean and efficient staff of one full-time Weed Control Coordinator and five seasonal spray staff members. This staff assists agricultural, residential and commercial customers with identification and treatment of noxious and nuisance weeds. Onsite inspections and educational materials are

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## Locals partner with CWSD and FEMA for Coordinated Floodplain Management

For the past several years, Carson Water Subconservancy District (CWSD) has been working with the Federal Emergency Management Agency (FEMA) to address flooding issues in the Carson River Watershed. Here is a brief description of one of our projects:

### *Carson River Flood Mapping*

#### *Project ~ Mitch Blum*

HDR Engineering is developing detailed hydrology, hydraulic models, and floodplain mapping for approximately a 40 mile reach of the Carson River in Lyon County and Carson City, Nevada for the Carson Water Subconservancy District (CWSD) through a grant from FEMA Region 9. This work is being conducted under the FEMA Cooperating Technical Partners (CTP) program and is part of continuing efforts to provide sound floodplain management in the Carson River Watershed.



*Photo courtesy of HDR*

In order to assess spatial, temporal and volumetric flood impacts, complex unsteady flow HEC-RAS modeling



**Carson River  
Get on the Bus  
Watershed Tour 2012**  
*June 18—19, 2012*  
*8:30 a.m.—4:30 p.m.*

#### *Headwaters to the Terminus*

Carson River Coalition and Carson Water Subconservancy District invites you to join us for an informative day sharing 2011 programs, projects, and studies accomplished throughout the watershed. Hear about noxious weeds, aquatic invasive species, river projects and what's on the horizon!

**To register, download a registration form at [www.cwsd.org](http://www.cwsd.org) and send to CWSD via fax 775.887.7457 or email to**

**[kathi@cwsd.org](mailto:kathi@cwsd.org)**

was chosen for the project. It is envisioned that the modeling and mapping will be used for long term watershed -wide land use planning, with the immediate goal of submitting a Physical Map Revision (PMR) under FEMA guidelines and specifications. This particular PMR will result in updates to the Lyon County Flood Insurance Rate Map (FIRM) panels for the study reach. Other major project elements include: Project Management, Public Outreach, Data Collection, Field Reconnaissance, Hydrologic Analysis, Hydraulic Modeling, Floodplain Mapping, Reporting and Data Management. The five-year work plan is to re-map the Carson River Floodplain from Alpine County to Lahontan Reservoir. The CRC's River Corridor Working Group, whose members hail from all parts of the watershed, are partners in this process.

*Stay tuned next edition for a description of the Risk MAP Charter!*

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provided to help residents manage/eradicate noxious and nuisance weeds on their property. The Department offers full service spraying to residents with four fully equipped vehicles, an off road vehicle and four spray trailers available for rent to residents. Herbicides can be purchased at cost-plus pricing. The Department also treats and maintains State and County roads for noxious weeds through a government contract.

*70% of Nevada's weed-free hay growers are in Douglas County!*

The CVCD crews' efforts focus on agricultural lands (*primarily on or around Douglas County's weed-free hay growers*) and irrigation ditch work. These crews are available to agricultural producers at little to no cost. The County's funding allowed the purchase of spray equipment which was combined with the remaining America Reinvestment and Recovery Act (ARRA) funds through CVCD to deploy additional spray crews and a part-time weed mapper.

Combined efforts by both agencies lead to 2,500+ treated acres and enhanced the mapping program with 7,000+ acres being surveyed in 2011.



Perennial pepperweed being treated in the Carson Valley.

## OFF WITH THEIR HEADS !



MEDUSAHEAD RYE GRASS

The Douglas County Weed Department and the CVCD treat a myriad of nuisance and noxious weeds throughout the County; however, two particularly nasty weeds, Medusahead and Yellow Star Thistle (see adjacent photos), are a top priority.

Currently, small/localized infestations of these weeds are being treated within Douglas County and the weed crews are focused on freezing their expansion and hopefully achieving complete eradication.

If you see either of these two plants anywhere in the Carson River Watershed, please report to your local [conservation district](#) or [CWSD](#).



YELLOW STAR THISTLE

### **Workshop: Yellow Star Thistle Control & Preventing the Spread of Invasive Weeds**

**Whit Hall, River Fork Ranch**

**Genoa Lane, Genoa**

**April 11, 2012 at 1:00 pm - 2:30 pm**

**To Register: [evansm@unce.edu](mailto:evansm@unce.edu) or**

**775.887.2252 X 7916**

The Douglas County Weed Department and Carson Valley Conservation District are two of CWSD's many partners in the watershed. CWSD thanks them for all their hard work to reduce the spread of noxious weeds throughout the watershed.





# Clear Creek Watershed Council

*invites you to learn about three important projects  
occurring in our watershed  
Please join us:*

**April 12, 2012**

**6:00 – 8:00 PM**

Stewart Street Fire Station  
777 S. Stewart Street  
Carson City

## **Eric Yount, NV Dept. of Transportation**

will provide an update on the soil erosion control work along Hwy. 50 in the Clear Creek Watershed.

## **Tim Rowe, United States Geological Survey**

will present information on water quality sampling conducted in conjunction with the NDOT's soil erosion control work along Hwy. 50. Historical data and preliminary results will be discussed.

## **Jeremy Vican, Carson Valley Trails Association**

will present information on the new Clear Creek/Jacks Valley trail. Trail building will begin in a few months and Jeremy will fill you in on the what, when, where and, most importantly, how you can help.

### *Clear Creek Watershed Council Calendar*

- Full Council Meeting: April 12, 2012, 6:00 pm at 777 Stewart St. Carson City contact Brenda Hunt, Watershed Coordinator via phone 887-9005 or email [brenda@cwsd.org](mailto:brenda@cwsd.org)
- Volunteers Needed at Baily Fishing Pond: April 6, 2012, contact Linda Conlin at 775.230.0633
- Leadership Meeting: May 10, 2012, 6:00 pm at 3646 Summerhill Dr., Carson City, 89705

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message to convey and task to accomplish for our Carson River Watershed community? The Carson River is prone to flooding every five years on average, and 17 of the past 33 documented flooding events since 1852 have caused major flooding and extensive damage. Ensuring our floodplains within the river corridor and flood hazard areas are kept in an open and more natural state allows the river to access its floodplain during flood events, providing natural, no cost, flood protection (CRWFMP 2008). This type of protection is often referred to as the “Living River” concept and is a best practice in floodplain management. Benefits of this concept include:

- ♦ The river remains connected to its floodplain.
- ♦ Open floodplains provide storage for floodwaters, which can limit the damage downstream.
- ♦ Wildlife, riparian and river habitat are minimally disturbed.
- ♦ Water quality and supply are enhanced.
- ♦ Structures are not built in hazardous, unstable and unsafe areas.



*Dangers of channel migration are severe. This home in the Dayton Valley was torn apart when banks were eroded by the force of floodwaters in the incised channel. (Marilyn Newton, Reno Gazette Journal)*

Let's look to our neighbors to the north as an example. In the Truckee River Watershed, much of the floodplain through Reno and Sparks contains buildings, residences and roads. As a result, the estimated cost of damages from the large 1997 river floods was over 30 times greater along the Truckee

River than along the Carson River (UNCE Fact Sheet 11-69). The Truckee Flood Management Project is looking at a price tag of around 1.6 billion dollars to retroactively obtain a “living river”. Do current and future residents of the Carson River Watershed want this to be their future? It is much less hazardous and costly to prevent development in floodplains than to protect development after it is built. Since floodplains are our water storage areas during flooding events, Carson Watershed communities can avoid future catastrophic flood damages if they work now to keep the river's floodplains in agriculture and open space uses. Currently, most communities along the Carson River are not located in the floodplain; therefore, we have a timely opportunity to achieve floodplain

protection and safeguard our future.

*“Building in the floodplain is like setting your tent up on the highway when no cars are coming.”*

*(Vicki Watson, University of Wisconsin)*

The CRC's River Corridor Working Group is a voluntary partnership that works toward the completion of the suggested actions outlined in the Floodplain Management Plan. These actions range from education and outreach to LiDAR imaging and floodplain

mapping (see p. 2). The University of Nevada Cooperative Extension (UNCE) recently published four colorful brochures to inform the public about flooding hazards and the importance of floodplain management. These brochures explain the functions and values of a protected floodplain for water quality, wildlife habitat and community safety; the benefits of maintaining agricultural land use in floodplains; and warn about the dangers of channel migration to structures built near river channels.

So what can you do to help? The CRC needs everyone to engage and inform our elected officials, floodplain property owners and the general public about flooding issues. If you have other ideas about how to promote this message effectively, or if you'd like to join the CRC, and/or obtain copies of the UNCE brochures, call [or email Brenda at CWSO, 775.887.9005/brenda@cwsd.org](mailto:brenda@cwsd.org). ~ Thanks John Cobourn & Steve Lewis, UNCE for contributing greatly to this article!

Download a copy of the Carson Watershed River Flood Management Plan at <http://www.cwsd.org/library/Final%20floodplain%20plan%209-08.pdf>.

Do you have events or articles that you would like to have published in "The Flow"?

Please send email to [debbie@cwsd.org](mailto:debbie@cwsd.org).

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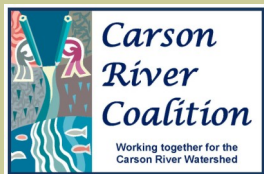
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This newsletter has been developed in part with Clean Water Act 319 (h) funds from the Nevada Division of Environmental Protection.

## Upcoming Events

### **Yellow Starthistle Control Workshop**

April 11, 2012, 1:00—2:30 pm

Contact: [evans@unce.edu](mailto:evans@unce.edu) or 775.887.2252 x 7916

### **Washoe Tribe Earth Day**

April 14, 2012, 9:00 am—2:00 pm

Dresslerville Community, 919 Highway 395 South, Gardnerville

### **CRC Recreation Working Group**

#### **Kick-Off**

April 18, 2012, 9:00 am

CWSD Conference Room

Contact: Brenda Hunt 775.887.9005

### **CRC Education Working Group**

April 23, 2012, 9:00—10:30 am

CWSD Conference Room

Contact Linda Conlin 775.230.0633

### **UNCE Capital City Farm Days**

May 10-11, 2012, 8:45 am—2:00 pm

Fuji Park Park Exhibit Hall & Fairgrounds

Contact: Sandy Wallin 775.887.2252 or [wallins@unce.edu](mailto:wallins@unce.edu)

### **UNCE Weed Warrior Training**

May 16-17, 2012, 8:30 am—4:30 pm

To Register, contact: Sue Donaldson

### **Get on the Bus Watershed Tour**

June 18-19, 2012, 8:30 am—4:30 pm

To Register, contact: Kathi Lawrence 775.887.1260 or [kathi@cwsd.org](mailto:kathi@cwsd.org).

**Save A Tree...**

by receiving a digital copy of newsletter!

Email [kathi@cwsd.org](mailto:kathi@cwsd.org) to switch. Thanks!



CARSON WATER SUBCONSERVANCY DISTRICT

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